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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,841	12/12/2003	Lap-Wai Chow	B-4425NP 621267-1	3188
36716	7590	06/01/2005	EXAMINER	
LADAS & PARRY			LEE, EUGENE	
5670 WILSHIRE BOULEVARD, SUITE 2100			ART UNIT	
LOS ANGELES, CA 90036-5679			PAPER NUMBER	

2815

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/735,841	<b>Applicant(s)</b> CHOW ET AL.	
	<b>Examiner</b> Eugene Lee	<b>Art Unit</b> 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                                       |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/24, 7/28, 9/02</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I (claims 1-6) in the reply filed on 4/20/05 is acknowledged.

Claims 7 thru 13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 4/20/05.

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, (1) a substrate **having** a gate region (line 2 of claim 6), and (2) the two of said plurality of active regions being **separated** from one another by said **gate region** (line 4 of claim 6) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. The substrate does not have a gate region, the gate region is above the substrate and does not separate plurality of active regions

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

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drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

3. The disclosure is objected to because of the following informalities: on page 10, line 5, the word "turned" is misspelled; on page 18, line 9, it appears a word is missing between "microscopic" and "investigates".

Appropriate correction is required.

### *Claim Objections*

4. Claims 2, 4, and 6 are objected to because of the following informalities: for example, in lines 7 and 8 of claim 6, it appears the word "conductivity" is missing between the words "second" and "type". Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear what the applicant means by the limitation “separated from said first well by a minimum first conductivity type to second conductivity type separation” in lines 2-3 of said claim. For the sake of compact prosecution, the Examiner is interpreting the limitation to be referring to any type of separation, however, appropriate clarification and/or correction.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Schrantz 4,912,053. Schrantz discloses (see, for example, FIG. 15) a transistor (camouflaged circuit structure) comprising a top gate region (gate region) 130, substrate 120, P-type source region (first active region of a first conductivity type) 140, P-type drain region (second active region of a first conductivity type) 142, and P-type channel region (first well of said first conductivity type) 128. The P-type channel region provides an electrical path between the source and drain regions.

Regarding claim 5, the P-type channel is deeper than the source and drain regions.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2 thru 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrantz '053 as applied to claims 1, and 5 above, and further in view of Spadea 3,983,620. Schrantz does not disclose a plurality of wells of a second type, at least one of said plurality of wells of a second type being in physical contact with said first active region. However, Spadea discloses (see, for example, Fig. 19) a semiconductor device comprising P+ source and drain regions 17, 17' and N+ guard rings (plurality or wells of a second type) 22. It would have been obvious to one of ordinary skill in the art at the time of invention to have a plurality of wells of a second type, at least one of said plurality of wells of a second type being in physical contact with said first active region in order to isolate the transistor from other elements in a semiconductor device.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schrantz 4,912,053 in view of Maki et al. 6,373,106 B2. Schrantz discloses (see, for example, FIG. 15) a transistor (semiconductor circuit) comprising a substrate 120, top gate region (gate region) 130, P-type source region/drain region (plurality of active regions of a first conductivity type) 140/142, and P-type channel region (first well of said first conductivity type) 128. Schrantz does not disclose a plurality of wells of a second type being partially disposed under said at least two

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of said plurality of active regions, wherein said plurality of wells of a second type are separated from said first well. However, Maki discloses (see, for example, FIG. 1) a semiconductor device comprising N-type source/drain regions 4, and P-well (plurality of wells) 3b. It would have been obvious to one of ordinary skill in the art at the time of invention to have a plurality of wells of a second type being partially disposed under said at least two of said plurality of active regions, wherein said plurality of wells of a second type are separated from said first well in order to isolate the transistor from other elements in a semiconductor device.

#### **INFORMATION ON HOW TO CONTACT THE USPTO**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Lee whose telephone number is 571-272-1733. The examiner can normally be reached on M-F 8-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on 571-272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Eugene Lee  
May 28, 2005

A handwritten signature in black ink, appearing to read 'Eugene Lee', with a long horizontal line extending to the right.